

Amendments to the Claims: This listing of claims will replace all prior versions, and listings, of claims in the application

Listing of Claims:

1. (Currently Amended) A system comprising:

a compression ignition engine configured to operate in a first, normal running mode to produce exhaust gas, and in a second mode, wherein when operating in the second mode the engine produces an exhaust gas comprising an increased level of carbon monoxide (CO) relative to the exhaust gas produced in the first mode;

means to switch engine operation between the two modes solely in response to at least one of exhaust gas temperature ~~or~~ and catalyst bed temperature; and

an exhaust system disposed downstream of the compression ignition engine for receiving the exhaust gas therefrom, the exhaust system comprising a catalysed component comprising a flow through, non-filtered substrate monolith comprising a palladium (Pd) catalyst supported on a first support material associated with at least one base metal promoter and a platinum (Pt) catalyst associated with the supported Pd catalyst, wherein the catalysed component is an oxidation catalyst or a NO oxidation catalyst, and wherein when the catalysed component is the NO oxidation catalyst, a filter is located downstream of the catalysed component.

2. (Previously Presented) The system according to claim 1, wherein the engine is configured to produce exhaust gas comprising >2000ppm CO when running in the second mode.
3. (Previously Presented) The system according to claim 1, wherein the substrate monolith has an arrangement selected from the group consisting of:

- (a) a first layer comprising the Pt catalyst and a second layer overlying the first layer, which second layer comprising the supported Pd catalyst and the associated at least one base metal promoter;
- (b) a single washcoat layer, which layer comprising the supported Pd catalyst, the associated at least one base metal promoter and the supported Pt catalyst, wherein the Pd catalyst and the Pt catalyst are each supported on a separate and distinct particulate support material; and
- (c) a supported Pt catalyst located downstream of the supported Pd catalyst and the associated at least one base metal promoter.

4. - 12. (Cancelled)

- 13. (Previously Presented) The system according to claim 1, further comprising an engine control means, wherein the engine control means comprises an engine control unit (ECU).
- 14. (Previously Presented) The system according to claim 1, wherein the means for switching between the two modes switches between the first mode and the second mode when the temperature of the supported Pt catalyst is $<250^{\circ}\text{C}$.
- 15. (Previously Presented) The system according to claim 1, wherein the Pd catalyst and the Pt catalyst are both disposed on the same support material.
- 16. (Previously Presented) The system according to claim 1, wherein the at least one base metal promoter is selected from the group consisting of a reducible oxide, a basic metal and mixtures of any two or more thereof.
- 17. (Previously Presented) The system according to claim 16, wherein the reducible oxide is an oxide of a metal selected from the group consisting of manganese, iron, copper, tin, cobalt, cerium and mixtures thereof.

18. (Previously Presented) The system according to claim 16, wherein the reducible oxide is selected from the group consisting of MnO_2 , Mn_2O_3 , Fe_2O_3 , SnO_2 , CuO , CoO , CeO_2 and mixtures thereof.
19. (Previously Presented) The system according to claim 16, wherein the reducible oxide is dispersed on the first support material.
20. (Previously Presented) The system according to claim 1, wherein the first support material comprises particulate reducible oxide.
21. (Previously Presented) The system according to claim 16, wherein the basic metal is selected from the group consisting of

an alkali metal selected from the group consisting of sodium, potassium and caesium,

an alkaline earth metal selected from the group consisting of barium, magnesium, calcium and strontium,

a lanthanide metal selected from the group consisting of cerium, praseodymium and lanthanum, and

mixtures, compound oxides or mixed oxides of any two or more thereof.

22. - 24. (Cancelled)

25. (Previously Presented) The system according to claim 1, wherein the first support material is selected from the group consisting of alumina, silica-alumina, ceria, magnesia, titania, zirconia, a zeolite, and mixtures, composite oxides or mixed oxides of any two or more thereof.

26. - 29. (Cancelled)

30. (Previously Presented) The system according to claim 38, wherein a supported catalyst part of the catalysed component contains from 0.1 to 30.0% by combined weight of Pt and Pd based on the combined total weight of the supported Pd catalyst and the supported Pt catalyst.
31. (Previously Presented) The system according to claim 38, wherein a supported catalyst part of the catalysed component contains a weight ratio of from 95:5 to 10:90 Pd:Pt.
32. (Previously Presented) The system according to claim 1, wherein the catalysed component comprises from 30 to 300g/ft³ Pd and from 30 to 300g/ft³ Pt.
33. (Previously Presented) The system according to claim 38, wherein the supported catalysts contain from 0.1 to 10% Pt by weight and from 0.1 to 20% Pd by weight based on the combined total weight of the supported catalysts.
34. (Previously Presented) The system according to claim 1, wherein the engine is a diesel engine.
35. (Cancelled)
36. (Currently Amended) A process for operating an apparatus comprising a compression ignition engine configured to operate in a first, normal running mode to produce exhaust gas, and a second mode, wherein when operating in the second mode the engine produces an exhaust gas comprising an increased level of carbon monoxide (CO) relative to the exhaust gas of the first mode, means when in use to switch engine operation between the two modes solely in response to at least one of exhaust gas temperature ~~or~~ and catalyst bed temperature and an exhaust system comprising a catalysed component an oxidation catalyst or a NO oxidation catalyst, wherein when the catalysed component is the NO oxidation catalyst, a filter is located downstream of a catalyst component, and wherein the catalysed component comprises a flow through, non-filtered substrate monolith comprising a palladium (Pd) catalyst supported on a first support material associated with at least one base metal promoter and a platinum (Pt) catalyst associated

with the supported Pd catalyst, which process comprising running the engine in the first, normal running mode and switching the engine to the second running mode producing a value of at least one measurable parameter indicative of a condition of the engine is outside a pre-determined range.

37. (Cancelled)
38. (Previously Presented) The system according to claim 1, wherein the Pt catalyst is supported on a second support material.
39. (Previously Presented) The process according to claim 36, wherein the substrate monolith comprises an arrangement of the Pd catalyst and Pt catalyst components selected from the group consisting of:
- (a) a first layer comprising the Pt catalyst and a second layer overlying the first layer, which second layer comprising the supported Pd catalyst and the associated at least one base metal promoter; and
 - (b) a Pt catalyst located downstream of the supported Pd catalyst and the associated at least one base metal promoter.
40. (Previously Presented) The process according to claim 36, wherein the first support material is selected from the group consisting of alumina, silica-alumina, ceria, magnesia, titania, zirconia, a zeolite and mixtures, composite oxides or mixed oxides of any two or more thereof.
41. (Currently Amended) A system comprising:
- a compression ignition engine configured to operate in a first, normal running mode to produce exhaust gas, and configured to operate in a second mode, wherein when operating in the second mode the engine produces an exhaust gas comprising an increased level of carbon monoxide (CO) relative to the exhaust gas produced in the first mode;

means to switch engine operation between the two modes solely in response to at least one of exhaust gas temperature ~~or~~ and catalyst bed temperature; and

an exhaust system disposed downstream of the compression ignition engine for receiving the exhaust gas therefrom, the exhaust system comprising a catalysed component comprising: (1) a flow through, non-filtered substrate monolith comprising a palladium (Pd) catalyst supported on a first support material associated with at least one base metal promoter and (2) a second substrate comprising a filter on which is disposed a first platinum (Pt) catalyst, wherein the substrate monolith is upstream of the filter and the catalysed component is a catalysed soot filter.

42. (Previously Presented) The system according to claim 41, wherein the substrate monolith has an arrangement selected from the group consisting of:
- (a) a first layer comprising a second Pt catalyst and a second layer overlying the first layer, which second layer comprising the supported Pd catalyst and the associated at least one base metal promoter;
 - (b) a single washcoat layer, which layer comprising the supported Pd, the associated at least one base metal promoter and a second Pt catalyst, wherein the Pd catalyst and the first Pt catalyst are each supported on a separate and distinct particulate support material; and
 - (c) a second Pt catalyst located downstream of the supported Pd catalyst and the associated at least one base metal promoter.

43. (Currently Amended) A system comprising:

a compression ignition engine configured to operate in a first, normal running mode to produce exhaust gas, and in a second mode, wherein when operating in the second mode the engine produces an exhaust gas comprising an increased level of carbon monoxide (CO) relative to the exhaust gas produced in the first mode;

means to switch engine operation between the two modes solely in response to at least one of exhaust gas temperature ~~or~~ and catalyst bed temperature; and

an exhaust system disposed downstream of the compression ignition engine for receiving the exhaust gas therefrom, the exhaust system comprising a catalysed component comprising a flow through, non-filtered substrate monolith comprising a palladium (Pd) catalyst supported on a first support material associated with at least one base metal promoter, wherein the system further comprises a second substrate disposed downstream of the substrate monolith and comprising a platinum (Pt) catalyst, wherein the catalysed component is an oxidation catalyst or a NO oxidation catalyst, and wherein when the catalysed component is the NO oxidation catalyst, a filter is located downstream of the catalysed component.

44. (Previously Presented) The system according to claim 1, wherein the substrate monolith comprises the supported Pd catalyst and the associated at least one base metal promoter on an upstream part of the substrate monolith, and the Pt catalyst is on a downstream part of the substrate monolith.
45. (Previously Presented) The system according to claim 41, wherein the substrate monolith further comprises a second platinum (Pt) catalyst.
46. (Previously Presented) The system according to claim 43, wherein the catalysed component is the NO oxidation catalyst whereby the filter is located downstream of the catalysed component.
47. (Currently Amended) A system comprising:

a compression ignition engine ~~operable~~ configured to operate in a first, normal running mode to produce exhaust gas, and ~~operable~~ in a second mode, ~~which wherein~~ when operating in the second mode, the engine produces an exhaust gas comprising an increased level of carbon monoxide (CO) relative to the exhaust gas produced in the first mode;

means to switch engine operation between the two modes; and

an exhaust system disposed downstream of the compression ignition engine for receiving the exhaust gas therefrom, the exhaust system comprising a catalysed component comprising (1) a first substrate comprising a first filter and a palladium (Pd) catalyst supported on a first support material associated with at least one base metal promoter and (2) a second substrate comprising a second filter and a platinum (Pt) catalyst.

48. (Previously Presented) The system according to claim 1, wherein the engine is configured to produce exhaust gas comprising >9000ppm CO when running in the second mode.

49. (New) A system comprising:

a compression ignition engine configured to operate in a first, normal running mode to produce exhaust gas and in a second mode, wherein when operating in the second mode, the engine produces an exhaust gas comprising an increased level of carbon monoxide (CO) relative to the exhaust gas produced in the first mode;

means to switch engine operation between the two modes; and

an exhaust system disposed downstream of the compression ignition engine for receiving the exhaust gas therefrom, the exhaust system comprising a catalysed component comprising a flow through, non-filtered substrate monolith comprising a palladium (Pd) catalyst supported on a first support material associated with at least one base metal promoter and a platinum (Pt) catalyst associated with the supported Pd catalyst, wherein the catalysed component is an oxidation catalyst or a NO oxidation catalyst, wherein when the catalysed component is the NO oxidation catalyst, a filter is located downstream of the catalysed component, and wherein the substrate monolith has an arrangement selected from the group consisting of:

- (a) a first layer comprising the Pt catalyst and a second layer overlying the first layer, which second layer comprising the supported Pd catalyst and the associated at least one base metal promoter;
 - (b) a single washcoat layer, which layer comprising the supported Pd catalyst, the associated at least one base metal promoter and the supported Pt catalyst, wherein the Pd catalyst and the Pt catalyst are each supported on a separate and distinct particulate support material; and
 - (c) a supported Pt catalyst located downstream of the supported Pd catalyst and the associated at least one base metal promoter.
50. (New) The system according to claim 49, wherein the means to switch engine operation between the two modes is in response to at least one of exhaust gas temperature, catalyst bed temperature or, if a filter is present, a need to regenerate the filter.
51. (New) A process for operating an apparatus comprising a compression ignition engine configured to operate in a first, normal running mode to produce exhaust gas and in a second mode, wherein when operating in the second mode, the engine produces an exhaust gas comprising an increased level of carbon monoxide (CO) relative to the exhaust gas of the first mode, means when in use to switch engine operation between the two modes and an exhaust system comprising a catalysed component of an oxidation catalyst or a NO oxidation catalyst, wherein when the catalysed component is the NO oxidation catalyst, a filter is located downstream of a catalyst component, and wherein the catalysed component comprises a flow through, non-filtered substrate monolith comprising a palladium (Pd) catalyst supported on a first support material associated with at least one base metal promoter and a platinum (Pt) catalyst associated with the supported Pd catalyst, which process comprising running the engine in the first, normal running mode and switching the engine to the second running mode producing a value of at least one measurable parameter indicative of a condition of the engine is outside a pre-determined range, and wherein the substrate monolith comprises an

arrangement of the Pd catalyst and Pt catalyst components selected from the group consisting of:

- (a) a first layer comprising the Pt catalyst and a second layer overlying the first layer, which second layer comprising the supported Pd catalyst and the associated at least one base metal promoter; and
 - (b) a Pt catalyst located downstream of the supported Pd catalyst and the associated at least one base metal promoter.
52. (New) The system according to claim 51, wherein the means to switch engine operation between the two modes is in response to at least one of exhaust gas temperature, catalyst bed temperature or, if a filter is present, a need to regenerate the filter.
53. (New) A system comprising:
- a compression ignition engine configured to operate in a first, normal running mode to produce exhaust gas and in a second mode, wherein when operating in the second mode, the engine produces an exhaust gas comprising an increased level of carbon monoxide (CO) relative to the exhaust gas produced in the first mode;
 - means to switch engine operation between the two modes; and
 - an exhaust system disposed downstream of the compression ignition engine for receiving the exhaust gas therefrom, the exhaust system comprising a catalysed component comprising: (1) a flow through, non-filtered substrate monolith comprising a palladium (Pd) catalyst supported on a first support material associated with at least one base metal promoter and (2) a second substrate comprising a filter on which is disposed a first platinum (Pt) catalyst, wherein the substrate monolith is upstream of the filter and the catalysed component is a catalysed soot filter, and the substrate monolith has an arrangement selected from the group consisting of:

- (a) a first layer comprising a second Pt catalyst and a second layer overlying the first layer, which second layer comprising the supported Pd catalyst and the associated at least one base metal promoter;
 - (b) a single washcoat layer, which layer comprising the supported Pd, the associated at least one base metal promoter and a second Pt catalyst, wherein the Pd catalyst and the first Pt catalyst are each supported on a separate and distinct particulate support material; and
 - (c) a second Pt catalyst located downstream of the supported Pd catalyst and the associated at least one base metal promoter.
54. (New) The system according to claim 53, wherein the means to switch engine operation between the two modes is in response to at least one of exhaust gas temperature, catalyst bed temperature or to regenerate a filter.